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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER
LLP
1300 I STREET, NW
WASHINGTON, DC 20005

EXAMINER

TANG, SON M

ART UNIT	PAPER NUMBER
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2632

DATE MAILED: 05/07/2003

16

Please find below and/or attached an Office communication concerning this application or proceeding.

14

Office Action Summary	Application No.		Applicant(s)	
	09/837,228		POPP ET AL.	
	Examiner		Art Unit	
	Son M Tang		2632	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 and 41-58 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 and 41-58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 9
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Specification

1. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claim 52 been renumbered 53. Misnumbered claim 53 been renumbered 54.

Misnumbered claim 54 been renumbered 55.

Misnumbered claim 55 been renumbered 56.

Misnumbered claim 56 been renumbered 57.

Misnumbered claim 57 been renumbered 58.

2. Claim 54 objected to because of the following informalities: it is unclear of which previous claim it depends upon (51 or 52). Appropriate correction is required.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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2. Claims 1, 7-8, 18-19, 20-27, 41-43, 49 and 52-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grabowski et al. [US 3,713,491] in view of Granek et al. [US 4,058,167].

Regarding to claim 1: Grabowski et al. discloses a fire suppression system of the storing freight area in an aircraft, comprising a fire detector [32] and suppressor unit [12] which discharges suppressant upon detection of fire condition [as shown in Fig. 1-2 and col. 1, lines 10-45 and col. 4, lines 51-68]. Grabowski et al. fail to disclose a transmitter associated with the storage unit and transmit a first signal to at least one receiver, which configured to provide a second signal indicating detection of the fire condition. Granek et al. teach a fire suppression system which comprising a plurality transmitters [16] associated with the fire protecting units, and configured to transmit a first signal upon detection of the fire condition to the receiver [48] includes a plurality relays [54] which is a part of the receiver, the receiver provides a second signal that indicating of the fire condition to a warning light [51] [as shown in Fig. 1, 5 and col. 4, lines 34-68]. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ transmitters and receivers of Granek et al. into the system of Grabowski et al. for the advantage of be able to recognize and identify which unit that the fire condition occurred. And since both references are in the same field of invention, it is obvious for one skill in the art would able to modify one into another invention.

Regarding to claim 8: Grabowski et al. and Granek et al. disclose the instant claimed invention except for: the first signal is an infrared signal. Granek et al. teach that the first signal is a radio frequency signal, since infrared signal and radio signal are use for transmitting information. Therefore, it would have been obvious to one having ordinary skill in

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the art at the time the invention was made to use an infrared signal instead of radio signal for the purpose of its requirement such as long/short range or the condition of the environment or area.

Regarding to claim 18: refer to claim 1 above.

Regarding to claim 19: Grabowski et al. and Granek et al. disclose all the limitation as described above, Granek et al. further teach the application mechanism (met by nozzle 14 and suppressant conduits [11, 12]) which associated with one of the predetermined positions, that met by each room in a building, and is being arrange between one of the units and the source as shown in Fig. 1. It would have been obvious to one having ordinary skill in the art that the system should have a pressurized vessel for the suppressor for the purpose of facilitating suppressant dispersion includes an application mechanism such as nozzle and conduits so the system can be able to transfer suppressant into the fire area.

Regarding to claims 24-26: Grabowski et al. and Granek et al. disclose all the limitation as described above, Granek et al. further teach a control unit met by a receiver [48] includes a decoder, which receives signal from the transmitter and configured to determine the origin of the first signal (detector signal) based on the second signal (transmitter signal). And the control unit (receiver) transmits a third signal to an indicator [51] to indicate the origin of the first signal (detected signal), and control panel [55] transmits a fourth signal to the relays which discharge the fire suppressant material into the storage unit. [as shown in Fig. 5].

Regarding to claim 27: refer to claim 8.

Regarding to claim 41: Grabowski et al. discloses a fire suppression system in a cargo of an aircraft [cited in col. 1, lines 20-25 and col. 9, lines 10-20], comprising a fire detector [32] and suppressor unit [12] which discharges suppressant upon detection of fire condition [as

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shown in Fig. 1-2 and col. 1, lines 10-45 and col. 4, lines 51-68]. Grabowski et al. does not specific about wherein the fire suppression device located inside the container. However, Grabowski et al. stated that the suppression device unit is a self-contained unit (portable), therefore, it is easy to install in any available spaces of the container. It is obvious of one having ordinary skill in the art at the time the invention was made to be able to dispose the self-contained suppressor (vessel) at any location as desired.

Grabowski et al. fail to disclose a plurality of containers in the storage area, wherein each container includes a base and a cover having an opening, and a transmitter emits a first signal through the opening when the fire detection system is releases the fire suppressant material. Granek et al. teach a fire suppression system which comprising a plurality transmitters [16] associated with plurality containers (rooms) in the fire protecting building, and configured to transmit a first signal upon detection of the fire condition to the receiver [48] includes a plurality relays [54] which configured to release the fire suppressant [as shown in Fig. 1, 5 and col. 4, lines 34-68]. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ transmitters and receivers of Granek et al. into the system of Grabowski et al. for the advantage of be able to recognize and identify which unit that the fire condition occurred. And since both references are in the same field of invention, it is obvious for one skill in the art would able to modify one into another invention. Further more, it is obvious that each container (room) should have a base (floor) and a cover (ceiling) includes an opening through for disposing a suppressant nozzle.

Regarding to claim 42: Grabowski et al. and Granek et al. disclose all the limitation as described in claim 41 above, Granek et al. further teach a receiver [48] includes a plurality or

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receiver relays [54] which is a part of the receiver, the receiver provides a second signal that indicating of the fire condition to a warning light [51] on the control panel [55] [as shown in Fig. 1, 5 and col. 4, lines 34-68]. Granek et al. does not specific show a receiver located above each of the containers. However, as long as the receiver is receiving signal from the transmitters, it obvious of one having ordinary skill in the art would motivate to locate the receiver above the containers (rooms) or on the side of the rooms would be a matter of design choice.

Regarding to claims 43 and 52: Grabowski et al. discloses a fire suppression system of the storing freight area in an aircraft, comprising a fire detector [32] and suppressor unit [12] which discharges suppressant upon detection of fire condition [as shown in Fig. 1-2 and col. 1, lines 10-45 and col. 4, lines 51-68]. Grabowski et al. fail to disclose a transmitter associated with the storage unit and transmit a first signal to at least one receiver, which configured to provide a second signal indicating detection of the fire condition. Granek et al. teach a fire suppression system which comprising a plurality transmitters [16] associated with the fire protecting units, and configured to transmit a first signal upon detection of the fire condition to the receiver [48] includes a plurality relays [54] which is a part of the receiver, the receiver provides a second signal that indicating of the fire condition to a warning light [51] [as shown in Fig. 1, 5 and col. 4, lines 34-68]. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ transmitters and receivers of Granek et al. into the system of Grabowski et al. for the advantage of be able to recognize and identify which unit that the fire condition occurred. And since both references are in the same field of invention, it is obvious for one skill in the art would able to modify one into another invention.

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Granek et al. further teach that the first signal is a radio frequency signal, because radio and infrared signals are use for transmitting information. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use an infrared signal instead of radio signal for the purpose of its requirement such as long/short range or the condition of the environment or area.

Regarding to claim 7: As stated by Grabowski et al. that the suppressor unit [12] can be used either as an individual as self-contained or can be combined with other units in the system [col. 4, lines 17-20] Grabowski et al. fail to show that the pressurized vessel located within the storage unit. However, as long as it is a self-contained unit (portable) and easy to install or remove. It is obvious of one having ordinary skill in the art at the time the invention was made to be able to dispose the self-contained suppressor (vessel) at any location as desired.

Regarding to claim 49: Refer to claim 7

Regarding to claim 53: Refer to claim 19

Regarding to claim 54: Refer to claim 20

Regarding to claim 55: Refer to claim 23

Regarding to claim 56: Refer to claim 24

Regarding to claim 57: Refer to claim 25

Regarding to claim 58: Refer to claim 26

3. Claims 2-6 and 44-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grabowski et al. [US 3,713,491] in view of Granek et al. [US 4,058,167] in claim 1 above, and further in view of Pappas [US 4,101,872].

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Regarding to claim 2: Grabowski et al. and Granek et al. disclose all the limitation as described above, except for a plurality of receivers, and wherein an individual transmitter and an individual receiver are associated with each of the plurality of units. Pappas teaches a fire detection system which comprising a plurality of receivers [23] that corresponds to each individual transmitter [20] of each unit that met by each level of a building [as shown in Fig. 1]. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ plurality receivers corresponds to transmitter as suggested by Pappas into the system of the combination above, for the purpose of identifying where is fire condition occurred.

Regarding to claim 3-4: As disclosed by the combination above, Pappas further teaches that wherein each individual receiver is position relative with the predetermined unit [as shown in Fig. 1] and provided to a control panel through control station [25] includes the identify transmitter that associated with that unit [as cited in col. 5, lines 16-50].

Regarding to claim 5: Grabowski et al. disclose a prior art, which comprises, a cargo being transport by aircraft, trailer and railroad etc. Grabowski et al. fail to specific wherein the storage unit is a container. However, it would have been obvious that storage unit, room or container is in the same category of mean uses for protecting or holding material.

Regarding to claim 6: As disclose by the combination references above, they fail to specify wherein the storage units are pallets. However, as long as the fire detector system is being detected and suppressed, employing any type of storage for the system performing the same function would not constitute an inventive step but an obvious of design choice. It would have been obvious to one of ordinary skill in the art at the time the invention was made to

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employ any well-known type of storage units, such as the well-known pallets for protecting material as desired.

Regarding to claim 44: Refer to claim 2

Regarding to claim 45: Refer to claim 3

Regarding to claim 46: Refer to claim 4

Regarding to claim 47: Refer to claim 5

Regarding to claim 48: Refer to claim 6

Regarding to claim 49: Refer to claim 7

Regarding to claim 50: Refer to claim 9

4. Claims 14-17, 20-22, 51 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grabowski et al., Granek et al. and Pappas [US 4,101,872] as applied to claim 2 above, and further in view of **Sears** [US 6,032,745].

Regarding to claims 14-16: As disclosed all the limitation by the combination in the claim above except for the source of pressurized fire suppressant material with a popup device configured to apply the fire suppressant to the storage unit upon detection of the fire condition. Sears teaches a valve [10] for a pressurized source of fire suppressant [11] [col. 4, lines 22-38] having a popup means [24] for dispersing the fire suppressant. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the fire suppression device of Sears for the fire suppression device of the combination as modified above, for the purpose of dispersing the fire suppressant. To trigger actuation of the fire suppressant device by an indication of a fire condition would have been obvious in order to suppress a fire.

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Regarding to claim 17: The instant claimed invention is disclosed by the combination above, Granek et al. further teach that a control panel [55] having a warning indicator [51] provided by the transmitter [16] [as shown in Fig. 1, and 5, col. 4, lines 37-45]. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a control panel which indicating fire condition as taught by Granek et al. into the system of the combination, for the purpose of better alerting human perception.

Regarding to claims 20-22, 51 and 54: Refer to claims 14-16.

5. Claims 9 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grabowski et al. [US 3,713,491] in view of Granek et al. [US 4,058,167] in claim 1 above, and further in view of Eguchi [US 3,909,814].

Regarding to claim 9: Grabowski et al. and Granek et al. disclose all the limitation as described in claim 1 above, they fail to specify wherein the transmitter includes a bimetallic switch. Eguchi teaches fire detector which uses of bimetallic switch 1 as shown in [Fig. 1-3]. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a bimetallic switch as taught by Eguchi into the system of the combination above for the purpose of reducing nuisance fire detection signal.

Regarding to claim 50: refer to claim 9 above.

6. Claims 10-13, 23 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grabowski et al., Granek et al. and Eguchi in the claims above, and further in view of **Fierbaugh** [US 4,987,958].

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Regarding to claims 10-13: As the combination disclose all the limitation as described in the claims above, they fail to show the bimetallic switch in contact with and extending through the surface of the storage unit. Fierbaugh teaches a bimetallic fire sensor [21] extending into a potential fire condition environment. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a bimetal detection means of the combination extend into the container for the purpose of detecting a fire condition therein. The particular surface used for the container would have been obvious design consideration base on the means to be protected, and since applicant has not disclosed that the blanket solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with or without it.

Regarding to claims 23, 55: Refer to claim 10-13.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Enk et al. [US 4,566,542], Carducci [US 5,540,402], Bruensicke [US 4,646,848] and Hindrichs et al. [US 5,038,867].

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Son M Tang whose telephone number is (703)306-5970. The examiner can normally be reached on 4/9 First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel J Wu can be reached on (703)308-6730. The fax phone numbers for the

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organization where this application or proceeding is assigned are (703)305-3988 for regular communications and (703)305-3988 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

Son Tang
April 23, 2003


DANIEL J. WU
PRIMARY EXAMINER
5/2/03